

Possible Solutions

3a.

$$\tan 27^\circ = \frac{b}{5}$$

$$5(\tan 27^\circ) = 5\left(\frac{b}{5}\right)$$

$$b = 5(\tan 27^\circ)$$

$$b = 2.5 \text{ cm}$$

b.

$$\tan 35^\circ = \frac{d}{2}$$

$$2(\tan 35^\circ) = 2\left(\frac{d}{2}\right)$$

$$d = 2(\tan 35^\circ)$$

$$d = 1.4 \text{ cm}$$

c.

$$\tan 59^\circ = \frac{g}{3}$$

$$3(\tan 59^\circ) = 3\left(\frac{d}{3}\right)$$

$$d = 3(\tan 59^\circ)$$

$$d = 5.0 \text{ cm}$$

d.

$$\tan 43^\circ = \frac{m}{8}$$

$$8(\tan 43^\circ) = 8\left(\frac{m}{8}\right)$$

$$d = 8(\tan 43^\circ)$$

$$d = 7.5 \text{ cm}$$

4.

a.

$$\tan 64^\circ = \frac{4.5}{p}$$

$$p(\tan 64^\circ) = p\left(\frac{4.5}{p}\right)$$

$$p(\tan 64^\circ) = 4.5$$

$$\frac{p(\tan 64^\circ)}{\tan 64^\circ} = \frac{4.5}{\tan 64^\circ}$$

$$p = \frac{4.5}{\tan 64^\circ}$$

$$p = 2.2 \text{ cm}$$

b.

$$\tan 72^\circ = \frac{8.7}{r}$$

$$r(\tan 72^\circ) = r\left(\frac{8.7}{r}\right)$$

$$r(\tan 72^\circ) = 8.7$$

$$\frac{r(\tan 72^\circ)}{\tan 72^\circ} = \frac{8.7}{\tan 72^\circ}$$

$$r = \frac{8.7}{\tan 72^\circ}$$

$$r = 2.8 \text{ cm}$$

c.

$$\tan 23^\circ = \frac{1.2}{p}$$

$$p(\tan 23^\circ) = p\left(\frac{1.2}{p}\right)$$

$$p(\tan 23^\circ) = 1.2$$

$$\frac{p(\tan 23^\circ)}{\tan 23^\circ} = \frac{1.2}{\tan 23^\circ}$$

$$p = \frac{1.2}{\tan 23^\circ}$$

$$p = 2.8 \text{ cm}$$

TT 2. Foundations and Pre-calculus Mathematics 10 (Pearson), question 4 on page 111.

4a.

$$\cos 37^\circ = \frac{m}{5.8}$$

$$5.8(\cos 37^\circ) = 5.8\left(\frac{m}{5.8}\right)$$

$$m = 5.8(\cos 37^\circ)$$

$$m = 4.6 \text{ cm}$$

b.

$$\tan 52^\circ = \frac{r}{3.7}$$

$$3.7(\tan 52^\circ) = 3.7\left(\frac{r}{3.7}\right)$$

$$r = 3.7(\tan 52^\circ)$$

$$r = 4.7 \text{ cm}$$

c.

$$\sin 62^\circ = \frac{10.4}{z}$$

$$z(\sin 62^\circ) = z\left(\frac{10.4}{z}\right)$$

$$z(\sin 62^\circ) = 10.4$$

$$\frac{z(\sin 62^\circ)}{\sin 62^\circ} = \frac{10.4}{\sin 62^\circ}$$

$$z = \frac{10.4}{\sin 62^\circ}$$

$$z = 11.8 \text{ cm}$$

d.

$$\cos 55^\circ = \frac{8.3}{p}$$

$$p(\cos 55^\circ) = p\left(\frac{8.3}{p}\right)$$

$$p(\cos 55^\circ) = 8.3$$

$$\frac{p(\cos 55^\circ)}{\cos 55^\circ} = \frac{8.3}{\cos 55^\circ}$$

$$p = \frac{8.3}{\cos 55^\circ}$$

$$p = 14.5 \text{ cm}$$